Remarks

Receipt of the office action mailed November 10, 2003, is acknowledged. Claims 1-55 are pending in the application. Claims 23-55 have been withdrawn from consideration because of a request from the Examiner for an oral election to a restriction requirement. Claims 14-20 and 22 have been rejected under 35 U.S.C. §102(b) as being unpatentable over Cahlander et al., U.S. Patent 4,922,435 (Cahlander). Claims 4, 11 and 21 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Cahlander in view of Dietrich et al., U.S. Patent 5,630,070 ("Dietrich"). Claims 1-3, 5-10, and 12-13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Cahlander. Applicant traverses the rejections, and in keeping with the foregoing amendments and the following remarks, claims 1-22 are in condition for allowance.

The Examiner telephoned the attorney of record on October 21, 2003 to request an oral election to a restriction requirement between the system claims 1-22 and the method claims 23-55. In response, applicant's attorney orally elected system claims 1-22 for examination. Applicant herein confirms election of claims 1-22, without traverse, for further prosecution in the present application. However, in doing so, applicant does not intend to abandon the scope of the non-elected claims 23-55, but may pursue the non-elected claims 23-55 in a divisional application.

Claim 14, as amended, recites a processor programmed to determine cooking instructions for food items based on, in part, a selected relation between variable quantities of processed food items and the desired quantities of food items at desired time intervals. Additionally, claim 14 as amended, recites an interface operationally coupled to the processor and the memory and configured to communicate the cooking

instructions determined by the processor to a user. In contrast, Cahlander does not disclose such a processor and an interface.

Cahlander is directed to an automated robotic food frying cell 110 (i.e., a frying station) for use in a fast food restaurant. The system of Cahlander includes a short term plan indicating the volume of a select item for a certain time interval, e.a., a 15 minute interval. The system continuously compares the current inventory to the short term plan schedule to determine whether more food should be prepared. Cahlander discloses the following at column 29, lines 15-25, regarding the rate by which food is produced during restaurant operation:

> In operation of fry cell 110, the data contained by computer 616 together with the **fry cell software operates to produce food at a rate that is based on the projected rate for that time of day from the historical data contained in computer 616. A plan of operation for the overall day is projected from the store opening to closing based on the historical sales data.** This data is utilized by the system to generate a more detailed plan covering a shorter period of time, which may be an hour or less, such as a fifteen-minute period to produce product at the anticipated sales rate. The sales rate is set automatically on the basis of the daily plan for that day and can be increased or decreased by a human operator, for the entire day or for just a certain period, such as the lunch hour.

(Emphasis added).

As shown by the above-quoted section, Cahlander relies only on accumulated historical sales data and determines a plan of operation well in advance. The only short term correction provided in Cahlander for the historical data is based on the point of sale system or manual untervention, as disclosed in Cahlander at column 30, lines 23-29, as follows:

> On a real time basis, **the information from the point of sale units or by command from the store manager or**

> **operator can interrupt the schedule in order to change the product priority and/or production rate of the robotic production fry cell.** The interrupt is done in such a manner that all activities in process in the fry cell are still scheduled, and the schedule of the priority item is worked into the short-term plan as soon as possible. Any product that has already been dispensed will be processed in accordance with the scheduled plan. The plan can be automatically modified so that production is maintained satisfying the daily plan.

(Emphasis added).

In other words, if the point of sale system indicates a higher demand, as a function solely of products sold, than the historical data, the fry cell 110 only changes the priority of frying the food for which the demand is high. **Because Cahlander relies only on current product sold data and the historical food sales data, Cahlander does not and cannot predict future food needs based on the current inventory.**

Based on the foregoing, Cahlander does not disclose or even suggest a processor programmed to determine cooking instructions for food items based on, in part, a selected relation between variable quantities of processed food items and the desired quantities of food items at desired time intervals. Additionally, Cahlander does not disclose or even suggest an interface operationally coupled to the processor and the memory and configured to communicate the cooking instructions determined by the processor to a user. Accordingly, claim 14 is not anticipated by Cahlander, because Cahlander does not teach, disclose or suggest every element recited in claim 14. Therefore, claim 14 and claims 15-22, which directly or through intervening claims depend from claim 14, are now in condition for allowance.

Regarding independent claims 1 and 7, the Office action states that "although claimed languages are not exactly similar, ... it would have been obvious to one of

ordinary skill in the art at the time of invention to rely on Cahlander for setting up a computer system for determining and transmitting cooking instruction for selected food items at time intervals to supply needs of the selected food items as in claims 1 & 7-8; because the cited reference sufficiently teaches similar components to perform tasks of serving/inventory food for future short-term and long-term schedules."

In making the above statement and the arguments leading thereto, the Examiner has overlooked two elements of claims 1 and 7, which are: 1) a variable quantity of processed selected food items stored on said programmable memory, and 2) control means for initiating a cooking instruction to said cooking station monitor in response to, in part, a selected relation between the variable quantity of selected food items and said table of desired quantities of selected food items at desired time intervals.

In contrast, Cahlander does not disclose or even suggest the above noted elements of claims 1 and 7. As discussed above, Cahlander relies on accumulated historical sales data to determine a plan of operation well in advance based on the historical data. Cahlander illustrates its reliance on historical data for food production in Tables II and IV, where hourly and quarter hour sales rate for food items are listed. The only short term correction provided in Cahlander for the historical data is based on product sold data provided by the point of sale system. In other words, if the product sold data indicates a higher demand than the historical data, the fry cell 110 only changes the priority of frying the food for which the demand is high. (See column 30, lines 23-29). **In summary, the system of Cahlander is incapable of predicting future food needs based on current inventory.**

Because a variable quantity of processed selected food items stored on said programmable memory, and control means that initiate a cooking instruction based on,

in part, a selected relation between the variable quantity of selected food items and said table of desired quantities of selected food items at desired time intervals are absent from Cahlander, Cahlander does not itself establish a *prima facie* case of obviousness. Furthermore, Cahlander fails to disclose or even suggest that it would be desirable or even possible to provide a variable quantity of processed selected food items stored on said programmable memory, and control means that initiate a cooking instruction based on, in part, a selected relation between the variable quantity of selected food items and said table of desired quantities of selected food items at desired time intervals, and hence, a *prima facie* case of obviousness has not been established. *See In re Sernaker*, 217 U.S.P.Q. 1 (Fed. Cir. 1983) and *Ex Parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. 1985).

Applicant respectfully submits that the relevant recitations of claims 1 and 7, which are discussed above, are structural in nature and are not merely functional, in contrast to the Examiner's statements on page 9 of the Office action. Additionally, simply because Cahlander is directed to a computer system for preparing selected food items based on historical data, it does not render claims 1 and 7 obvious. It is submitted that the following language of claims 1 and 7: "a variable quantity of processed selected food items stored on said programmable memory," and "control means for initiating a cooking instruction to said cooking station monitor in response to [in part] ... a selected relation between the variable quantity of selected food items and said table of desired quantities of selected food items at desired time intervals," structurally define the system disclosed and claimed in the present application and must be considered in assessing patentability.

For several decades, U.S. courts have consistently held that the computer programming, which controls the operation of the computer, imparts structure. For example, in *In re Noll*, 191 U.S.P.Q. 721, 726 (C.C.P.A. 1976), the court stated:

> There is nothing abstract about the claimed invention. It comprises physical structure, including storage devices and electrical components uniquely configured to perform specified functions through the physical properties of electrical circuits to achieve controlled results. Appellant's programmed machine is structurally different from a machine without that program.

(emphasis added)

See also In re Alappat, 31 U.S.P.Q.2d 1545, 1558 (Fed. Cir. 1994), where the Federal Circuit stated:

> We have held that such programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.

Thus, in the context of programmed computers, the claimed manner in which a computer operates imparts a structural difference to the computer. Consequently, it is respectfully submitted that the above-discussed recitations of claims 1 and 7 that specify how the system of the present application is programmed to operate, structurally define the system of the present application and must be considered in determining the patentability of the claims of the present application.

The Office action does not specifically address where any disclosure or even suggestion in Cahlander exists regarding the above-discussed elements of claims 1 and 7. Applicant respectfully submits that, while it is permissible for the Examiner to give claims their broadest reasonable interpretation, it is not proper to completely ignore entire paragraphs of a claim. Furthermore, even if the above-discussed recitations of

claims 1 and 7 are considered to be functional limitations, such recitations must be considered. *See, for example, Ex parte Bylund*, 217 U.S.P.Q. 492, 498 (PTO Bd. of App. 1981), where the Patent Office Board of Appeals stated: A

> Although we have sustained several of the Examiner's rejections we here wish to specifically note that contrary to the Examiner's assertions, functional language in the claims must be given full weight and may not be disregarded in evaluating the patentability of the subject matter defined employing such functional language.

In view of the foregoing, applicant submits that claims 1 and 7, and claims 2, 3, 5, 6, 8-10, and 12-13, which depend from claims 1 and 7, respectively, are patentable in view of Cahlander. Therefore, the rejection of claims 1-3, 5-10, and 12-13, under 35 U.S.C. § 103(a) should be withdrawn.

Claims 4, 11 and 21 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Cahlander in view of Dietrich. Applicant respectfully traverses this rejection.

Claims 4, 11 and 21 depend from independent claims 1, 7 and 14, respectively. Each of claims 1 and 7 recites control means for initiating a cooking instruction to said cooking station monitor in response to, in part, a selected relation between the variable quantity of selected food items and said table of desired quantities of selected food items at desired time intervals. Similarly, claim 14 recites a processor programmed to determine cooking instructions for food items based on, in part, a selected relation between variable quantities of processed food items and the desired quantities of food items at desired time intervals.

As described in the foregoing, Cahlander does not disclose or even suggest the above-noted elements of claims 1, 7 and 14. Furthermore, Cahlander fails to disclose or even suggest that it would be desirable or even possible to provide a system having

the above-noted elements of claims 1, 7 and 14. Also, Dietrich does not disclose or even suggest the noted elements of claims 1, 7 and 14.

Dietrich is directed to optimization of manufacturing resource planning. Dietrich discloses a mathematical routine for resource allocation so as to maximize income in a situation wherein there are limitations on the inventory of raw materials and tools to be employed in the manufacturing process. Referring to FIG. 7 of Dietrich, the use of a limited resource raw food material that is an ingredient of several processed foods is optimized to increase income. Thus, Dietrich is directed to an optimized routine for allocation of raw food materials to prepare a final food product.

In contrast, the present application is directed to a system for maintaining current and predicting future food needs, and is not directed in any way to how a limited inventory of raw materials can be used to optimize production of a number of end products. Therefore, Dietrich cannot be combined with Cahlander to establish a *prima facie* case of obviousness.

Because each of Cahlander and Dietrich lacks any disclosure or suggestion to provide a system having the above-noted elements of claims 1, 7 and 14, Cahlander and Dietrich cannot be used individually or in combination to render claims 1, 7 and 14, and claims depending therefrom obvious. Therefore, rejection of claims 4, 11 and 22 based on a combination of Cahlander and Dietrich should be withdrawn.

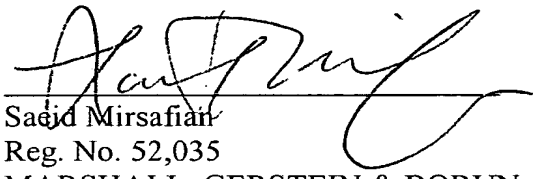
In view of the foregoing, claims 1-22 as presented herein are in good and proper form for allowance. A favorable action on the part of the Examiner is respectfully solicited.

Applicant is filing herewith a petition for a two-month extension of time for filing this response and has enclosed a check for $420.00 to cover the corresponding

fee. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 13-2855, under Order No. 29178/38215A. A duplicate copy of this paper is enclosed.

The Examiner is invited to contact the undersigned at the telephone number listed below in order to discuss any remaining issues or matters of form that will place this case in condition for allowance.

Respectfully submitted,



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